



ABSTRACT

- approved
for entry
5/13/2007
MC*
- 5 ~~A contrast improving sheet to be disposed on the viewing side of a display, such as a rear projection display or a liquid crystal display, to display images in high contrast and in excellent directivity, and a rear projection screen provided with the contrast improving sheet are provided. A contrast improving sheet 11 includes a first optical functional element 1 and a second optical functional element 2 disposed on the viewing side thereof the first optical functional element 1. The first optical functional element 1 is provided with~~
has a plurality of protrusions, 3 arranged in a direction or distributed in a plane.
- 10 ~~Each of the protrusions 3 has each having a pair of opposite total-reflection facets 5 for totally reflecting image light rays substantially perpendicularly incident on the entrance surface and a flat facet 6 extending between the front edges, on the side of the exit surface, of the pair of opposite total-reflection facets 5. Light absorbing layers 7 are formed in V-grooves between the~~
adjacent protrusions 3. The second optical functional element 2 is provided with
- 15 has a light path correcting layer 9 for correcting light paths followed by the image light rays totally reflected by the total-reflection facets 5 of the protrusions 3 such that the image light rays are emitted through the exit surface substantially perpendicularly to the exit surface. The light path correcting
- 20 layer 9 has a plurality of alternately inclined planes 8 inclined in opposite directions, respectively, and the inclined planes 8 inclined in opposite directions are arranged alternately.